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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/478,188 01/05/00 SHEN

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EXAMINER

HM12/0216

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ART UNIT

PAPER NUMBER

1652  
DATE MAILED:

02/16/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/478,188

Applicant(s)  
Shen et al.

Examiner  
Kathleen Kerr

Group Art Unit  
1652



☒ Responsive to communication(s) filed on 2/14/01

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 1 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-71 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☐ Claim(s) \_\_\_\_\_ is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☒ Claims 1-71 are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1652

*Application Status*

1. A restriction requirement was mailed on January 19, 2001 (Paper No. 8). Applicants' representative telephoned the Examiner to state that the pending restriction requirement was improper (see Interview Summary below).

Claims 1-71 are pending in the instant application.

*Interview Summary*

2. On February 14, 2001, Applicants' representative telephoned the Examiner to discuss the restriction requirement (Paper No. 8). Applicants stated that the restriction requirement was improper because said requirement did not specifically point out the subject matter of each Group; Applicants cited MPEP section 814. Applicants also stated that they are entitled to having up to ten nucleotide sequences examined together without restriction.

The Examiner agreed to enter the instant Interview Summary as a response to the restriction requirement and to send Applicants a supplemental restriction requirement. The points asserted by Applicants in the Interview as noted above are addressed in the accompanying supplemental restriction requirement.

*Conclusion*


3. No response to the instant Interview Summary is required by Applicants. Applicants are required to response to the accompanying supplemental restriction requirement as stated therein.

Art Unit: 1652

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Dr. Kathleen M. Kerr whose telephone number is (703) 305-1229. The Examiner can normally be reached on Monday to Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Ponnathapura Achutamurthy, can be reached on (703) 308-3804. The fax phone number for this Group is (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

  
PONNATHAPUACHUTAMURTHY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600

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KMK

February 14, 2001

Art Unit: 1652

## DETAILED ACTION

### *Application Status*

1. The following is a supplemental restriction requirement as requested by Applicants. Such requirement must be considered in conjunction with the previous restriction requirement (Paper No. 8).

### *Restriction*

2. As stated in the previous Office action (Paper No. 8), Restriction to one of the following inventions is required under 35 U.S.C. 121.

For the following Groups 1-49 (SuperGroup A), each are drawn to Claims 1-9 and 18-23

~~as said claims are drawn to nucleic acids encoding only the noted~~ open reading frame (ORF),

related expression vectors, and related host cells, classified in class 536, subclass 23.7. These

ORFs are ORFs -7 through 42, respectively, excluding ORF 9.

Group 1	ORF -7
Group 2	ORF -6
Group 3	ORF -5
Group 4	ORF -4
Group 5	ORF -3
Group 6	ORF -2
Group 7	ORF -1
Group 8	ORF 0
Group 9	ORF 1
Group 10	ORF 2
Group 11	ORF 3
Group 12	ORF 4
Group 13	ORF 5

Art Unit: 1652

Group 14	ORF 6
Group 15	ORF 7
Group 16	ORF 8
Group 17	ORF 10
Group 18	ORF 11
Group 19	ORF 12
Group 20	ORF 13
Group 21	ORF 14
Group 22	ORF 15
Group 23	ORF 16
Group 24	ORF 17
Group 25	ORF 18
Group 26	ORF 19
Group 27	ORF 20
Group 28	ORF 21
Group 29	ORF 22
Group 30	ORF 23
Group 31	ORF 24
Group 32	ORF 25
Group 33	ORF 26
Group 34	ORF 27
Group 35	ORF 28
Group 36	ORF 29
Group 37	ORF 30
Group 38	ORF 31
Group 39	ORF 32
Group 40	ORF 33
Group 41	ORF 34
Group 42	ORF 35
Group 43	ORF 36
Group 44	ORF 37
Group 45	ORF 38
Group 46	ORF 39
Group 47	ORF 40
Group 48	ORF 41
Group 49	ORF 42

Group 50 (SuperGroup B) is drawn to Claim 10-14 as previously described.

Art Unit: 1652

For the following Groups 51-99 (SuperGroup C), each are drawn to Claims 15-17 as said claims are drawn to polypeptides encoded by *only* the **noted** open reading frame (ORF), classified in class 435, subclass 183. These ORFs are ORFs -7 through 42, respectively, excluding ORF 9. The Examiner notes that in the previous Office action this SuperGroup contained an extra Group based on incorrect counting; appropriate correction is below.

Group 51	ORF -7
Group 52	ORF -6
Group 53	ORF -5
Group 54	ORF -4
Group 55	ORF -3
Group 56	ORF -2
Group 57	ORF -1
Group 58	ORF 0
Group 59	ORF 1
Group 60	ORF 2
Group 61	ORF 3
Group 62	ORF 4
Group 63	ORF 5
Group 64	ORF 6
Group 65	ORF 7
Group 66	ORF 8
Group 67	ORF 10
Group 68	ORF 11
Group 69	ORF 12
Group 70	ORF 13
Group 71	ORF 14
Group 72	ORF 15
Group 73	ORF 16
Group 74	ORF 17
Group 75	ORF 18
Group 76	ORF 19
Group 77	ORF 20
Group 78	ORF 21
Group 79	ORF 22

Art Unit: 1652

Group 80	ORF 23
Group 81	ORF 24
Group 82	ORF 25
Group 83	ORF 26
Group 84	ORF 27
Group 85	ORF 28
Group 86	ORF 29
Group 87	ORF 30
Group 88	ORF 31
Group 89	ORF 32
Group 90	ORF 33
Group 91	ORF 34
Group 92	ORF 35
Group 93	ORF 36
Group 94	ORF 37
Group 95	ORF 38
Group 96	ORF 39
Group 97	ORF 40
Group 98	ORF 41
Group 99	ORF 42

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For the following Groups 100-149 (SuperGroup D), each are drawn to Claims 24-50 as said claims are drawn to methods of modifying a biological molecule using only a polypeptide encoded by *only* the **noted** open reading frame (ORF), classified in class 435, subclass 183. These ORFs are ORFs -7 through 42, respectively, **NOT** excluding ORF 9. The Group numbers are adjusted with respect to the previous Office action to account for the above discrepancy in counting.

Group 100	ORF -7
Group 101	ORF -6
Group 102	ORF -5
Group 103	ORF -4



Art Unit: 1652

Group 104	ORF -3
Group 105	ORF -2
Group 106	ORF -1
Group 107	ORF 0
Group 108	ORF 1
Group 109	ORF 2
Group 110	ORF 3
Group 111	ORF 4
Group 112	ORF 5
Group 113	ORF 6
Group 114	ORF 7
Group 115	ORF 8
Group 116	ORF 9
Group 117	ORF 10
Group 118	ORF 11
Group 119	ORF 12
Group 120	ORF 13
Group 121	ORF 14
Group 122	ORF 15
Group 123	ORF 16
Group 124	ORF 17
Group 125	ORF 18
Group 126	ORF 19
Group 127	ORF 20
Group 128	ORF 21
Group 129	ORF 22
Group 130	ORF 23
Group 131	ORF 24
Group 132	ORF 25
Group 133	ORF 26
Group 134	ORF 27
Group 135	ORF 28
Group 136	ORF 29
Group 137	ORF 30
Group 138	ORF 31
Group 139	ORF 32
Group 140	ORF 33
Group 141	ORF 34
Group 142	ORF 35

Art Unit: 1652

Group 143	ORF 36
Group 144	ORF 37
Group 145	ORF 38
Group 146	ORF 39
Group 147	ORF 40
Group 148	ORF 41
Group 149	ORF 42

For the following Groups 150-157 (SuperGroup E), each are drawn to Claims 51-53 as said claims are drawn to methods of synthesizing a chromaprotein type agnation core using only a particular polypeptide encoded by *only* the **noted** open reading frame (ORF), classified in class 435, subclass 76. The Group numbers are adjusted with respect to the previous Office action to account for the above discrepancy in counting.

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Group 150	ORF 17
Group 151	ORF 20
Group 152	ORF 21
Group 153	ORF 29
Group 154	ORF 30
Group 155	ORF 32
Group 156	ORF 35
Group 157	ORF 38

For the following Groups 158-165 (SuperGroup F), each are drawn to Claims 54-56 as said claims are drawn to methods of synthesizing a deoxysugar using only a particular polypeptide encoded by *only* the **noted** open reading frame (ORF), classified in class 435, subclass 72. The Group numbers are adjusted with respect to the previous Office action to account for the above discrepancy in counting.

Art Unit: 1652

Group 158	ORF 17
Group 159	ORF 20
Group 160	ORF 21
Group 161	ORF 29
Group 162	ORF 30
Group 163	ORF 32
Group 164	ORF 35
Group 165	ORF 38

For the following Groups 166-171 (SuperGroup G), each are drawn to Claims 57-60 as said claims are drawn to methods of synthesizing a beta amino acid using only a particular polypeptide encoded by *only* the **noted** open reading frame (ORF), classified in class 435, subclass 106. The Group numbers are adjusted with respect to the previous Office action to account for the above discrepancy in counting.

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Group 166	ORF 4
Group 167	ORF 11
Group 168	ORF 24
Group 169	ORF 23
Group 170	ORF 25
Group 171	ORF 26

Group 172 (SuperGroup H) is defined as Group 173 was defined in the previous Office action.

For the following Groups 173-178 (SuperGroup I), each are drawn to Claims 69-71 as said claims are drawn to methods of making a cell resistant to agnation or analogue thereof using polynucleotides encoding a particular polypeptide encoded by *only* the **noted** open reading frame

Art Unit: 1652

(ORF), classified in class 435, subclass 471. The Group numbers are adjusted with respect to the previous Office action to account for the above discrepancy in counting.

Group 173	ORF 9
Group 174	ORF 2
Group 175	ORF 27
Group 176	ORF 0
Group 177	ORF 1 (c-terminus and n-terminus)
Group 178	ORF 2

A total of 178 independent or distinct Groups is noted above. Restriction to one of these Groups (inventions) is required as noted above.

3. The inventions are distinct for the reasons cited in the previous Office action, relating to both distinction and independence between SuperGroups, and distinction and independence among members (Groups) of SuperGroups.

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4. The previous note of possible rejoinder is still applicable, as based on a Group of any particular SuperGroup and the related Group (same ORF) in another particular SuperGroup.

#### *Sequence Compliance*

5. Sequence Compliance, as noted in the previous Office action, is still required in response to the instant Office action.

Art Unit: 1652

***Election***

6. Applicants are advised that the reply to this requirement **MUST** include an election of the invention (Group) to be examined, even though the requirement be traversed (37 CFR 1.143).

Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

***Response to Issues Raised in Interview (Paper No. 9)***

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~~7. For a summary of the Interview, see Paper No. 9.~~

The Examiner disagrees with Applicants' assessment that the pending restriction requirement was improper. While the Examiner did not, for example, specifically define which of the 49 open reading frames of SuperGroup A was in Group I, the division of the subject matter was clear. MPEP 814 states that "claims directed to each separate subject **should** be noted along with a statement of the subject matter to which they are drawn"...since "[t]his is the best way to most clearly and precisely indicate to applicant how the application should be restricted" (emphasis added). The Examiner notes that the definition of each individual Group requested by Applicants, i.e. Group I = subject matter X and Group II = subject matter Y, is not required by the MPEP so long as the restriction requirement is clear and precise; however, to facilitate

Art Unit: 1652

prosecution, the Examiner has included such definitions in the instant supplemental restriction requirement as requested by Applicants.

Concerning examining up to ten nucleotide sequences together, while the Examiner agrees with Applicants' assertion that the MPEP states that up to ten nucleotide sequences can be examined together as a reasonable number of nucleotide sequences in a single application (see MPEP 803.04), the Examiner notes that each Group in Claim 1 (SuperGroup A), for example, is drawn to more than one nucleotide sequence because Claim 1 is drawn to isolated nucleic acids *encoding* a polypeptide. In other words, Group I, as defined above, is not a single species of a nucleotide sequence, but is a genus of many nucleotide sequences all of which encode a protein encoded by ORF -7. While the MPEP does not consider nucleotide sequences encoding the same ~~protein as independent and distinct inventions (see MPEP 803.04), such nucleotide sequences are~~ multiple sequences, much greater than ten nucleotide sequences depending on the length of the protein and the degeneracy of the genetic code, and are thus not required or even indicated by the MPEP to be examined together.

### *Conclusion*

8. For a response to this Office action to be complete, Applicants MUST
  - a. elect a Group for prosecution, and
  - b. correct the error in the sequence listing.

Art Unit: 1652

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February 14, 2001